

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions of claims in the application.

1. (Currently Amended) A gateway card that is connected to an information processor and that receives and transmits data between different networks, the gateway card comprising:

an access accepting unit that accepts an access request from an apparatus connected to one of the networks;

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode; and

an access control unit that leads the apparatus to make access to an external apparatus connected to another one of the networks and in a state that the operation of the information processor is maintained in a power-saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the external apparatus, and the access control unit carries out a control to adjust a difference between communication protocols of said one of the networks and said another one of the networks,

wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal the access control unit analyzes the protocol relating to the access request and returns a dummy response to the apparatus; the access control unit issues to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and

notifies the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

2. (Original) The gateway card according to claim 1, wherein when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit leads the apparatus to make access to the information processor in a state that the operation mode is returned from the power-saving operation mode to the normal operation mode, and shifts the operation mode from the normal operation mode to the power-saving operation mode after the access ends.

3. (Currently Amended) A gateway card connected to an information processor and that receives and transmits data between different networks, the gateway card comprising:
an access accepting unit that accepts an access request from an apparatus connected to the networks;

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode; and

an access control unit that leads the apparatus to make access to the information processor in a state that the operation mode is returned from the power-saving operation mode to the normal operation mode, when the access request corresponds to the access to the information

processor, and shifts the operation mode from the normal operation mode to the power-saving operation mode after the access ends,

~~wherein the access request does not include a signal to be intended for waking up or sleeping the information processor, and data for generating the signal the access control unit analyzes the protocol relating to the access request and returns a dummy response to the apparatus; the access control unit issues to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifies the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.~~

4. (Currently Amended) A gateway control method to be applied to a gateway card connected to an information processor and that receives and transmits data between different networks, the gateway control method comprising:

an access request receiving step of receiving an access request from an apparatus connected to the networks;

a power mode checking step of determining whether the information processor is in the normal power mode or in the power save mode; and

an access control step of leading the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power-saving operation mode, when the access request is accepted in a state that the operation of the information

processor is in a power-saving operation mode and also when the access request corresponds to the access to the external apparatus, and the access control step carrying out a control to adjust a difference between communication protocols of said different networks,

~~wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal~~
the access control step includes analyzing the protocol relating to the access request and returning a dummy response to the apparatus; the access control step includes issuing to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifying the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

5. (Original) The gateway control method according to claim 4, wherein when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the information processor, at the access control step, the apparatus is led to make access to the information processor in a state that the operation mode is returned from the power-saving operation mode to the normal operation mode, and the operation mode is shifted from the normal operation mode to the power-saving operation mode after the access ends.

6. (Currently Amended) A gateway control method to be applied to a gateway card connected to an information processor and that receives and transmits data between different networks, the gateway control method comprising:

an access request receiving step of receiving an access request from an apparatus connected to the networks;

a power mode checking step of determining whether the information processor is in the normal power mode or in the power save mode; and

an access control step of leading the apparatus to make access to the information processor in a state that the operation mode is returned from the power-saving operation mode to the normal operation mode, when the access request corresponds to the access to the information processor, and shifting the operation mode from the normal operation mode to the power-saving operation mode after the access ends, and the access control step carrying out a control to adjust a difference between communication protocols of said different networks,

wherein the access request does not include a signal to be intended for waking up or sleeping the information processor, and data for generating the signal the access control step includes analyzing the protocol relating to the access request and returning a dummy response to the apparatus; the access control step includes issuing to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifying the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

7. (Currently Amended) A gateway control program to be applied to a gateway card connected to an information processor and that receives and transmits data between different networks, the gateway control program comprising the steps of:

making an access accepting unit accept an access request from an apparatus connected to the networks;

making a power mode checking unit determine whether the information processor is in the normal power mode or in the power save mode; [[and]]

making an access control unit lead the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power-saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the external apparatus, and carrying out a control to adjust a difference between communication protocols of said different networks, and

wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal
making the access control unit analyze the protocol relating to the access request and returning a dummy response to the apparatus; making the access control unit issue to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the

information processor and notify the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

8. (Original) The gateway control program according to claim 7, wherein when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit leads the apparatus to make access to the information processor in a state that the operation mode is returned from the power-saving operation mode to the normal operation mode, and shifts the operation mode from the normal operation mode to the power-saving operation mode after the access ends.

9. (Currently Amended) A gateway control program to be applied to a gateway card connected to an information processor and that receives and transmits data between different networks, the gateway control program comprising the steps of:

making an access accepting unit accept an access request from an apparatus connected to the networks;

making a power mode checking unit determine whether the information processor is in the normal power mode or in the power save mode; [[and]]

making an access control unit lead the apparatus to make access to the information processor in a state that the operation mode is returned from the power-saving operation mode to the normal operation mode, when the access request corresponds to the access to the information

processor, and shifts the operation mode from the normal operation mode to the power-saving operation mode after the access ends, and carrying out a control to adjust a difference between communication protocols of said different networks, and

wherein the access request does not include a signal to be intended for waking up or sleeping the information processor, and data for generating the signal making the access control unit analyze the protocol relating to the access request and returning a dummy response to the apparatus; making the access control unit issue to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notify the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

10. (Currently Amended) A gateway device with an information processor, and a gateway section connected to the information processor and that receives and transmits data between different networks, the gateway section comprises:

an access accepting unit that accepts an access request from an apparatus connected to one of the networks;

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode; and

an access control unit that leads the apparatus to make access to an external apparatus connected to another one of the networks and in a state that the operation of the information

processor is maintained in a power-saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the external apparatus, and the access control unit carries out a control to adjust a difference between communication protocols of said one of the networks and said another one of the networks, [[and]]

~~the information processor further includes a power control unit that shifts the operation mode from a normal operation mode to the power saving operation mode, when a predetermined shift factor occurred,~~

~~wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal the access control unit analyzes the protocol relating to the access request and returns a dummy response to the apparatus; the access control unit issues to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifies the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.~~

11. (Original) The gateway device according to claim 10, wherein when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit issues a return notice to return the operation of the information

processor from the power-saving operation mode to the normal operation mode, then leads the apparatus to make access to the information processor, and issues a shift notice to shift the operation mode from the normal operation mode to the power-saving operation mode after the access ends, and the power control unit returns the operation mode from the power-saving operation mode to the normal operation mode based on the return notice, and shifts the operation mode from the normal operation mode to the power-saving operation mode based on the shift notice.

12. (Currently Amended) A gateway device with an information processor, and a gateway section connected to the information processor and that receives and transmits data between different networks, the gateway section comprises:

an access accepting unit that accepts an access request from an apparatus connected to the networks;

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode; and

an access control unit that issues a return notice to return the operation of the information processor from the power-saving operation mode to the normal operation mode, and leads the apparatus to make access to the information processor, when the access request corresponds to the access to the information processor, and issues a shift notice to shift the operation mode from the normal operation mode to the power-saving operation mode after the access ends, [[and]]

~~the information processor further includes a power control unit that returns the operation mode from the power saving operation mode to the normal operation mode based on the return notice, and shifts the operation mode from the normal operation mode to the power saving operation mode based on the shift notice,~~

~~wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal~~
the access control unit analyzes the protocol relating to the access request and returns a dummy response to the apparatus; the access control unit issues to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifies the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

13. (Currently Amended) A gateway control method to be applied to a gateway device with an information processor, and a gateway section connected to the information processor and that receives and transmits data between different networks,

the gateway section executes the steps comprising:

an access request receiving step of receiving an access request from an apparatus connected to the networks;
a power mode checking step of determining whether the information processor is in the normal power mode or in the power save mode; and

an access control step of leading the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power-saving operation mode, when the access request is accepted in the state that the operation of the information processor is in the power-saving operation mode and also when the access request corresponds to the access to the external apparatus, and the access control step carrying out a control to adjust a difference between communication protocols of said different networks,
[[and]]

~~the information processor executes a power control step of shifting the operation mode from a normal operation mode to the power saving operation mode, when a predetermined shift factor occurred,~~

~~wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal~~
the access control step includes analyzing the protocol relating to the access request and returning a dummy response to the apparatus; the access control step includes issuing to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifying the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

14. (Original) The gateway control method according to claim 13, wherein when the access request is accepted in a state that the operation of the information processor is in a power-

saving operation mode and also when the access request corresponds to the access to the information processor, at the access control step, a return notice to return the operation of the information processor from the power-saving operation mode to the normal operation mode, is issued, then the apparatus is led to make access to the information processor, and a shift notice to shift the operation mode from the normal operation mode to the power-saving operation mode after the access ends, is issued, and at the power control step, the operation mode is returned from the power-saving operation mode to the normal operation mode based on the return notice, and the operation mode is shifted from the normal operation mode to the power-saving operation mode based on the shift notice.

15. (Currently Amended) A gateway control method to be applied to a gateway device with an information processor, and a gateway section connected to the information processor and that receives and transmits data between different networks, the gateway section executes the steps comprising:

an access request receiving step of receiving an access request from an apparatus connected to the networks;

a power mode checking step of determining whether the information processor is in the normal power mode or in the power save mode; and

an access control step of issuing a return notice to return the operation of the information processor from the power-saving operation mode to the normal operation mode, and leading the apparatus to make access to the information processor, when the access request

corresponds to the access to the information processor, and issuing a shift notice to shift the operation mode from the normal operation mode to the power-saving operation mode after the access ends, and the access control step carrying out a control to adjust a difference between communication protocols of said different networks, [[and]]

~~the information processor further executes the steps comprising:~~

~~a power control step of returning the operation mode from the power-saving operation mode to the normal operation mode based on the return notice, and shifting the operation mode from the normal operation mode to the power-saving operation mode based on the shift notice,~~

~~wherin the aeeess request does not include a signal to be intended for waking up or sleeping the information processor, and data for generating the signal the access control step includes analyzing the protocol relating to the access request and returning a dummy response to the apparatus; the access control step includes issuing to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifying the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.~~

16. (Currently Amended) A gateway control program to be applied to a gateway device with an information processor, and a gateway section connected to the information processor and

that receives and transmits data between different networks, the gateway control program comprising the steps of:

making an access accepting unit accept an access request from an apparatus connected to the networks;

making a power mode checking unit determine whether the information processor is in the normal power mode or in the power save mode;

making an access control unit lead the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power-saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the external apparatus, and carrying out a control to adjust a difference between communication protocols of said different networks; and

making a power control unit shift the operation mode from a normal operation mode to the power-saving operation mode, when a predetermined shift factor occurred;

wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal
making the access control unit analyze the protocol relating to the access request and returning a dummy response to the apparatus; making the access control unit issue to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the

information processor and notify the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

17. (Original) The gateway control program according to claim 16, wherein when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit issues a return notice to return the operation of the information processor from the power-saving operation mode to the normal operation mode, then leads the apparatus to make access to the information processor, and issues a shift notice to shift the operation mode from the normal operation mode to the power-saving operation mode after the access ends, and the power control unit returns the operation mode from the power-saving operation mode to the normal operation mode based on the return notice, and shifts the operation mode from the normal operation mode to the power-saving operation mode based on the shift notice.

18. (Currently Amended) A gateway control program to be applied to a gateway device with an information processor, and a gateway section connected to the information processor and that receives and transmits data between different networks, the gateway control program comprising the steps of:

making an access accepting unit accept an access request from an apparatus connected to the networks;

making a power mode checking unit determine whether the information processor is in the normal power mode or in the power save mode;

making an access control unit issue a return notice to return the operation of the information processor from the power-saving operation mode to the normal operation mode, and lead the apparatus to make access to the information processor, when the access request corresponds to the access to the information processor, and issues a shift notice to shift the operation mode from the normal operation mode to the power-saving operation mode after the access ends, and carrying out a control to adjust a difference between communication protocols of said different networks, and

making a power control unit return the operation mode of the information processor from the power saving operation mode to the normal operation mode based on the return notice, and shift the operation mode of the information processor from the normal operation mode to the power saving operation mode based on the shift notice,

wherein the access request does not include a signal to be intended for waking up or sleeping the information processor by the external apparatus, and data for generating the signal making the access control unit analyze the protocol relating to the access request and returning a dummy response to the apparatus; making the access control unit issue to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notify the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.

19. (Currently Amended) A gateway card that interconnects an information processor, at least one server via a first network, and at least one client via a second network, the first network and the second network having different communication protocols, the information processor having a normal power mode and a power save mode, the gateway card comprising:

an access accepting unit that accepts a request from the client to access the server or the information processor;

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode; and

an access control unit that executes the request from the client, wherein if the request from the client is a request to access the server, the access control unit executes the request even if the power mode checking unit determines that the information processor is in the power save mode and carries out a control to adjust a difference between the different communication protocols of said first network and said second network,

~~whercin the access request does not include a signal to be intended for waking up or sleeping the information processor, and data for generating the signal the access control unit analyzes the protocol relating to the access request and returns a dummy response to the apparatus; the access control unit issues to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifies the information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.~~

20. (Currently Amended) A gateway card that interconnects an information processor, at least one server via a first network, and at least one client via a second network, the first network and the second network having different communication protocols, the information processor having a normal power mode and a power save mode, the gateway card comprising:

an access accepting unit that accepts a request from the client to access the server or the information processor;

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode; and

an access control unit that executes the request from the client, wherein if the request from the client is a request to access the information processor and, if the power mode checking unit determines that the information processor is in the power save mode, the access control unit instructs the information processor to change the power mode to the normal power mode, executes the request, and instructs the information processor to change the power mode to the power save mode and carries out a control to adjust a difference between the different communication protocols of said first network and said second network,

~~wherein the access request does not include a signal to be intended for waking up or sleeping the information processor, and data for generating the signal the access control unit analyzes the protocol relating to the access request and returns a dummy response to the apparatus; the access control unit issues to a power controller of the information processor a return request to return from the power saving operation mode to a normal operation mode when the protocol indicate a request for making access to the information processor and notifies the~~

information processor a shift factor for shifting from the normal operation to the power saving mode after the access ends.